ART 34 AMO Patent claims

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- 1. Method for updating information in an AAA server system, whereby - an updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3) is sent regularly by a first AAA server (RAD1, RAD2, RAD3) of the AAA server system (RADSS) to all the other AAA servers (RAD1, RAD2, RAD3) of the AAA server system (RADSS),
- this updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3) incorporates information about changes to the status of the subsets (A1, A2, A3) of the address pool (A) which are assigned to the first AAA server (RAD1, RAD2, RAD3), which have taken place since the previous updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3)
- before the updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3) is sent, an estimate is made in the first AAA server (RAD1, RAD2, RAD3) of the logical addresses which will be issued in the time period between the updating message which is about to be sent (UpdtRAD1, UpdtRAD2, UpdtRAD3) and the next-following updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3),
- subsets (A1, A2, A3) of the address pool (A), which are assigned to the first AAA server (RAD1, RAD2, RAD3), are selected from which to take the logical addresses which, according to the estimate, will be required in the time period, and
- the updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3) also contains information about which of the subsets (A1, A2, A3) of the address pool (A), which are assigned to the first AAA server (RAD1, RAD2, RAD3), have been selected from which to take the logical addresses which, according to the estimate, will be required in the time period.
- 2. Method in accordance with claim 1, characterized in that
- the estimate is made by forming the product of the maximum rate at which the AAA server (RAD1, RAD2, RAD3) can process requests for the issue of a logical address and the time period between the

APRT 34 AMOT updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3) which is about to be sent and the next-following updating message (UpdtRAD1, UpdtRAD2, UpdtRAD3).

- 3. Method in accordance with one of the claims 1 or 2, characterized in that
- the first AAA server (RAD1, RAD2, RAD3) checks whether the subsets (A1, A2, A3) of the address pool (A) which will be required according to the estimate are available, and
- if the result of the check by the first AAA server (RAD1, RAD2, RAD3) is negative, the assignment of a subset from another AAA server (RAD1, RAD2, RAD3) to the first AAA server (RAD1, RAD2, RAD3) is effected.
- 4. Method in accordance with one of the claims 1 or 2, characterized in that in the event of the failure of the first AAA server (RAD1, RAD2, RAD3), the subsets (A1, A2, A3) of the address pool (A) which are assigned to the first AAA server (RAD1, RAD2, RAD3) are assigned to a second AAA server (RAD1, RAD2, RAD3).
- 5. Method in accordance with claim 4, characterized in that the second AAA server (RAD1, RAD2, RAD3) is selected in accordance with the stipulations of a priority list of AAA servers (RAD1, RAD2, RAD3).
- 6. Method in accordance with claim 1 and one of the claims 4 or 5, characterized in that
- if a first AAA server (RAD1, RAD2, RAD3) fails the subsets (A1, A2, A3) of the address pool (A), which according to the last updating message received by the second AAA server (RAD1, RAD2, RAD3) from the first AAA server (RAD1, RAD2, RAD3) have been selected from which to take the logical addresses which according to the estimate will be required in the time period, will not be



used for the reissuing of logical addresses (IP1,  $\dots$ , IPN) for a period of time.

- 7. Method in accordance with claim 6, characterized in that the time period will be determined in accordance with the stipulations for the maximum permissible connection time.
- 8. Method in accordance with one of the preceding claims, characterized in that
- a second AAA server (RAD1, RAD2, RAD3) is rebooted, and
- the second AAA server (RAD1, RAD2, RAD3) transmits a multicast message to all the other AAA servers (RAD1, RAD2, RAD3) of the AAA server system (RADSS), by which it requests the dispatch of updating messages (UpdtRAD1, UpdtRAD2, UpdtRAD3) and the assignment of subsets (A1, A2, A3) of the address pool (A) to the first AAA server (RAD1, RAD2, RAD3).
- 9. Method in accordance with one of the preceding claims, characterized in that
- the TCP/IP protocol, the RADIUS protocol or the DIAMETER protocol is used as the transport protocol for the communication of updating messages (UpdtRAD1, UpdtRAD2, UpdtRAD3).